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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/845,856	04/30/2001	Ajit B. Dandekar	2001B036	3184

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EXAMINER

DANG, THUAN D

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 10/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicant(s)

09/845,856

Applicant(s)

DANDEKAR ET AL.

Examiner

Thuan D. Dang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 6, 11-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 6, 11-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 11, 12, 15, 16, and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Degnan et al (5,536,894).

Degnan discloses a process of alkylation of an aromatic such as benzene with ethylene or propylene in the presence of a catalyst containing MCM-56 and phosphorus (the abstract; col. 10, lines 28-67; col. 14, lines 7-11).

In example 15, Degnan discloses a catalyst containing 2.2 wt% of phosphorus.

The temperature of the process can be found on column 10.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1; 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 13, 14, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Degnan et al (5,536,894).

Degnan discloses a process as discussed above.

Degnan is silent as to the content of phosphorus in the catalyst as called for in claims 13 and 14 and does not disclose using MCM-22. However, the content of phosphorus is only the matter of selection and Degnan discloses that MCM-22 has similar characteristics with MCM-56 (see the whole patent to Degnan).

It would have been obvious to one having ordinary skill in the art at the time in the art at the time the invention was made to have modified the Degnan process by selecting an

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appropriate amount of phosphorus since it is expected that the Degnan catalyst containing any amount of phosphorus would yield similar results.

It would have been obvious to one having ordinary skill in the art at the time in the art at the time the invention was made to have modified the Degnan process by using MCM-22 in the place of MCM-56 in the catalyst of Degnan to arrive at the applicants' claimed catalyst since it is expected that using similar zeolites for preparation of the Degnan catalyst would yield catalysts having similar activities.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Degnan et al (5,536,894) in view of Cheng et al (5,557,024).

Degnan discloses a process as discussed above.

Degnan appears to be silent as to the phase of the alkylation (see the whole patent to Degnan). However, Cheng discloses that an alkylation in the presence of a MCM-56 catalyst can be operated in gas or liquid phase (the abstract; col. 12, lines 29-34).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Degnan by operating a liquid-phase alkylation process to arrive at the applicants' claimed process since it is expected that alkylation processes operated in the liquid or gas phase yield similar results.

Response to Arguments

Applicant's arguments filed on 2/18/2003 have been fully considered but they are not persuasive.

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The argument that the catalyst of example 15 of Degnan was prepared for use in catalytic cracking with phosphorus added is not persuasive since on column 14, lines 7-11, Degnan discloses the MCM-56 containing phosphorus. In the abstract, Degnan disclose MCM-56 catalyst is an aromatic alkylation catalyst.

The argument that all mention of phosphorus by Degnan is made in the context of catalytic cracking catalysts is not persuasive since Degnan discloses the catalyst is used of alkylation of aromatic hydrocarbon (column 10).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuan D. Dang whose telephone number is 703-305-2658. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 703-308-6824. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Thuan D. Dang
Primary Examiner
Art Unit 1764

94845856.4th

A handwritten signature in black ink, appearing to read 'Thuan D. Dang', with a long horizontal flourish extending to the right.